

CBC DRAFT UWI REGULATIONS

Chapter 7A – 04/04/03 Draft

FIRE-RESISTANT MATERIALS AND CONSTRUCTION METHODS USED WITHIN WILDLAND AREAS

SECTION 701A-SCOPE

This chapter applies to building materials and systems used in the exterior design and construction of buildings and structures located within wildland areas to safeguard against fire penetration and the spread of fire to buildings from vegetation and from building to building.
(revisit this)

The scope of these provisions shall apply to the exterior shell of buildings and structures located in designated wildland areas as determined by the fire authority.

SECTION 702A – PURPOSE

These standards include but are not limited to, measures that increase the likelihood of a structure to withstand intrusion by fire, such as building design and construction requirements that use fire resistant building materials, and provide protection of structure projections, including porches, decks, balconies and eaves, and structure openings including attic and eave vents and windows that have been tested with the intent of resisting the intrusion of a wildland fire. *Authority cited: Government Code 51189 Paragraph A*

SECTION 703A-DEFINITIONS

For the purposes of this chapter, the terms, phrases and words listed in this section and their derivatives shall have the indicated meanings. (TBA)

SECTION 704A-FIRE-RESISTANT MATERIALS AND SYSTEMS

704A.1 General.

Materials and systems used for fire-resistant purposes shall be limited to those accepted under test procedures given in Section 704A.2 . (need to establish the baseline for performance timeframe)

Alternate fire-resistant materials, assemblies and construction methods maybe approved by the building official on the basis of evidence submitted showing that the construction meets the required fire resistant performance criteria. (Equivalent to one-hour rating or other specific performance requirement – for variation, reference standard?)

704A.2 Qualification By Testing

Material and material assemblies tested in accordance with the requirements set forth in 704A.3 shall be accepted for use in accordance with the results and conditions of such tests.

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704A.3 Standards of Quality.

The UCFPL standards listed below are also listed in Chapter 35, Part III and are part of this code.

[For SFM] The standards listed below are adopted by the State Fire Marshal and are listed in Chapter 35. (Need to establish performance threshold for each UCFPL standard)

1. UCFPL-WL1.0 part 1 "Wall Siding & Sheathing, Direct Flame Exposure Test"
2. UCFPL-WL 1.0 part 2 "Eave, Direct Flame Exposure Test"
3. UCFPL-WN1.0 "Window, Direct Flame Exposure Test"
4. UCFPL-DU 1.0 "Unloaded Deck, Direct Flame Exposure Test"
5. UCFPL-DU 3.0 "Unloaded Deck, Burning Brand Exposure Test"

SECTION 705A ROOFS

705A.1 General.

Roof assemblies shall conform to the standards and requirements set forth in Chapter 15, Sections 1502, 1503.1, 1503.2, 1503.3, 1504.2.1, 1507.15. (SFM to submit a code change to the standards to include "materials used in installation must be equal to, or greater than, the materials used in the assembly tested" OSB vs. plywood quality, Type X gyp board, joints in assembly.)

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705A.2 Roof Openings

All openings into the roof and attic area including skylights and eave, gable, dormer, ridge and exhaust vents shall be constructed to prevent the intrusion of flame and embers into the attic area of the structure.

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Committee Intent: Not necessary here to regulate any vents that do not open directly into the attic area, i.e. sewer vents.

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705A.2.1 Roof Vents

All roof and attic vents shall be protected by screening material that conforms to Chapter 15, Section 1505.3. 1/8" mesh instead of 1/4"? Can't compromise ventilation.

705A.2.2 Vent Baffles

All roof, eave, and soffit vents shall be equipped with baffles or other device(s) that prevent the intrusion of embers and flames into the attic area of the structure.

705A.2.3 Skylights

Skylights shall be constructed and installed to provide fire protection equivalent to that provided by the required roof assembly.

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Committee Intent: To protect the integrity of the entire roofing assembly. Impact scenario & structural integrity See Chapters 24 & 26 for reference

705A.3 Roof Gutters

Roof gutters and downspouts shall be composed of non-combustible materials to prevent ignition of the roof edge and to limit the spread of fire to other building components.

SECTION 706A – EXTERIOR WALLS

706A.1 General.

Exterior wall assemblies shall be meet the requirements set forth in Chapter 7, Section 709.

Deleted: constructed in conformance with the standards and requirements

706A.2 Exterior Siding.

Exterior siding and cladding assemblies shall be in conformance with standard UCFPL-WL1.0? to limit the spread of fire to other building components and to prevent the intrusion of flame and radiant heat into the interior of the structure. Exterior siding and cladding materials used shall not contribute to the production of firebrands. (Need more information from lab – 1 hour? ASTM E119?)

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Proximity requirement = existing building code standards & local ordinances (orange & LA co.)
A Rx alternative is needed for ease of initial implementation and use by construction industry

706A.3 Exterior Wall Openings.

Exterior wall openings shall be constructed to limit the spread of fire to other building components and to prevent the intrusion of flame, embers and radiant heat into the interior of the structure.

706A.3.1 Windows

Exterior window assemblies shall meet the requirements of standard UCFPL-WN1.0.

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Shutters might be covered under alternative methods

Lab question: How is performance affected by larger windows? What is cumulative heat output on 150 kW and 300 kW flames?

Deleted: Other options: Fire shelter material? Non-combustible shutters – what is trigger? Heat, smoke, visible flame?¶

Limitations on configuration and/or window size based on performance? Pagni paper/Cohen research

Note: We need to coordinate with CEC proposed standards (esp on vinyl windows)

Deleted: All proposed window regulations must be evaluated in light of the

706A.3.2 Doors

Exterior door assemblies shall meet the requirements of standard UCFPL WL1.0.

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(Glass doors – same as window standards? Other doors - refer to other /existing standards?)

Note: What building standards have been adopted by local agencies?

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706A.3.3 Wall Vents

Eave, crawlspace and exhaust vents shall be equipped with vent baffles or other device(s) to prevent the intrusion of embers and flames into the interior of the structure.

Committee intent: This is covered by Section 2306.7 "Underfloor ventilation"

Automatic attic fans or swamp cooler an issue?

706A.4 Exterior Wall Projections

Exterior wall projections shall provide fire protection equivalent to that provided by the required exterior wall assembly

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Materials used to construct exterior wall projections shall not contribute to the production of firebrands.

707A. ANCILLARY STRUCTURES

707A.1 General.

Ancillary structures, including but not limited to carports, decks, patio covers and fences shall not contribute to the spread of fire to other building components.

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Materials used to construct ancillary structures shall not contribute to the production of firebrands.

707A.1.1 Decks.

Deck assemblies shall meet the requirements of UCFPL DU 1.0 and UCFPL DU 3.0.

SFM adoption of Article 86 UFC? Time component folded in to fire protection plan?

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(A fence that is attached to the structure and that portion which is constructed within ____ feet of the structure shall ____?) Other proximity issues?